

On the *Colydiidæ* collected by Mr. G. Lewis in Japan. By
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F.L.S.)

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(PLATE III.)

NOTHING was known of the *Colydiidæ* of Japan previous to Mr. George Lewis's explorations there; but these have shown that the Japanese archipelago is fairly rich in the Xylophagous insects constituting the family of Coleoptera we are now dealing with. This singularly successful collector has discovered in Japan no less than thirty-five species of the family, which is a large number when we recollect that Europe, which has been thoroughly explored for these insects by many entomologists, has only produced about fifty species, and America, north of Mexico, has not yet been proved to nourish so large a number as this latter. As the *Colydiidæ* are small insects, usually rare, and many of them of habits rendering their capture a matter of great difficulty, we may be sure that Japan has still a considerable number of species in addition to those met with by Mr. Lewis. Indeed we may take it for ascertained that the Japanese archipelago in proportion to its area is richer in *Colydiidæ* than either Europe or North America. Mr. Pascoe has worked out (*Journ. of Ent.* ii. pp. 121-143, Pl. viii.) the *Colydiidæ* collected in the Austro-Malay region by Wallace, and informs us that fifty species were obtained in that region. Of the thirty-five species detected by Mr. Lewis, twenty-nine have not been found elsewhere, five occur also in Ceylon, and one species is considered to be not specifically distinct from one of our European insects.

The family *Colydiidæ* is one in which genera are very numerous in proportion to the species; and I have considered the thirty-five species found in Japan as representing no less than twenty-four genera. Of this number eight appear, as far as I know at present, to be peculiar to Japan, viz. *Sympanotus*, *Pseudotarphius*, *Glyphocryptus*, *Labromimus*, *Acolophus*, *Cylindromicrus*, *Cautomus*, and *Thyroderus*. Six—*Colobicus*, *Cicones*, *Xu-*

*thia**, *Pycnomerus*, *Philothermus*, and *Cerylon*—must be considered as widely distributed. Four others—*Neotrichus*, *Teredolæmus*, *Leptoglyphus*, and *Ectomicrus*—are found in Ceylon as well as in Japan; while one, *Trionus*, occurs in Japan, Ceylon, and India. Four—*Ithris*, *Gempylodes*, *Erotylathris*, and *Dastarcus*†—may be looked on as more or less peculiar to the Austro-Malay region; and the remaining genus, *Endophlæus*, is characteristic at present of the Nearctic and Palæarctic regions.

From these data it would seem that the Colydiidæ of Japan are more allied to those of Ceylon than to those of any other region; and this conclusion is strengthened by the fact that several other species and genera find their nearest known allies in Ceylon. On the other hand, it must be borne in mind that we know next to nothing of the Colydiidæ of China and India, and that it is very probable that many of the resemblances between the Ceylonese and Japanese forms may prove to be instances of relationships between forms widely distributed in Eastern Asia. All that we are entitled then to conclude at present is, that there is but slight affinity between the European and Japanese Colydiidæ; that there is a considerably greater relationship with Ceylon; and that there may probably be really a wide distribution in the Oriental region of the forms common to these two provinces.

The Colydiidæ being, as previously remarked, insects of small size and very retiring habits, we of course as yet know but few of the forms actually existing in the world; the classification of the family therefore is in a rudimentary and unsatisfactory condition. I have in the main followed the arrangement of Erichson (*Nat. Deutsch. Ins.* iii.), except that his group Colydiini must be suppressed, as founded on erroneous observation. Horn (*Proc. Am. Phil. Soc.* xvii. p. 555 *et seq.*), in his *Synopsis of the Colydiidæ of the United States*, has proposed to retain the group

* *Xuthia*, Pascoe, appears to be not sufficiently different from *Eulachus*, which itself is so near to *Bitoma* that its suppression has been proposed by Horn and Leconte, but the latter course I think premature as yet.

† This genus has recently been redescribed as new by Fairmaire under the name *Pathodermus* (*Ann. Soc. Ent. Fr.* 1881, p. 79); although some of M. Fairmaire's supposed new species of it, six in number, are no doubt synonymous with some of the previously described *Dastarci*, yet others are no doubt new, and we learn from these that the genus extends in the west as far as Syria and Zanzibar; still it must be treated at present as chiefly an Oriental genus.

Colydiinæ by altering its definition, and has also proposed a new group "Deretaphrini." The Colydiini, as defined by Horn, and the Deretaphrini are evidently, however, not sufficiently distinct; and I propose consequently at present to fuse them in one group, to be called "Deretaphrini," as it is clearly convenient to suppress the group "Colydiini," and consequently its name, altogether: a source of considerable confusion in the study of the family will be thus eliminated.

Classified List of the Species of Japanese Colydiidæ.

Tribe SYNCHITINI.

- † Neotrichus, n. gen.
 N. hispidus, n. sp.
 Endophloeus, *Er.*
 E. serratus, n. sp.
 Sympanotus, n. gen.
 S. pictus, n. sp.
 Pseudotarphius, *Woll.*
 P. lewisii, *Woll.*
 Glyphocryptus, n. gen.
 G. brevicollis, n. sp.
 Labromimus, n. gen.
 L. variegatus, n. sp.
 † Colobicus, *Latr.*
 C. emarginatus, *Latr.*, var.
 C. granulatus, n. sp.
 Acolophus, n. gen.
 A. debilis, n. sp.
 † Cicones, *Curt.*
 C. oculatus, n. sp.
 C. oblongus, n. sp.
 * C. niveus, n. sp.
 * C. minimus, n. sp.
 * C. bitomoides, n. sp.
 † Trionus, n. gen.
 * T. opacus, n. sp.
 † Xuthia, *Pasc.*
 * X. parallela, n. sp.
 X. niponica, *Lew.*
 Ithris, *Pasc.*
 I. sculpturata, n. sp.

Tribe DERETAPHRINI.

- † Gempylodes, *Pasc.*
 G. lewisii, n. sp.

- Cylindromicrus, n. gen.
 C. gracilis, n. sp.
 † Teredolæmus, n. gen.
 T. guttatus, n. sp.
 (Teredus) politus, *Lew.*

Tribe BOTHRIDERINI.

- † Leptoglyphus, n. gen.
 L. vittatus, n. sp.
 Erotylathris, *Motsch.*
 E. costatus, n. sp.
 † Dastarcus, *Pasc.*
 D. longulus, n. sp.

Tribe PYCNOMERINI.

- † Pycnomerus, *Er.*
 P. vilis, n. sp.
 P. sculpturatus, n. sp.

Tribe CERYLONINI.

- Philothermus, *Aubé.*
 P. depressus, n. sp.
 † Ectomicrus, n. gen.
 E. rugicollis, n. sp.
 E. pubens, n. sp.
 † Cerylon, *Latr.*
 C. crassipes, n. sp.
 C. minimum, n. sp.
 C. curticolle, n. sp.
 Cautomus, n. gen.
 C. hystericulus, n. sp.
 Thyroderus, n. gen.
 T. porcatus, n. sp.

* These species occur in Ceylon.

† These genera occur in Ceylon.

NEOTRICHUS, nov. gen.

Corpus angustum, caput exsertum; antennæ liberæ, 11-articulatæ, clava biarticulata; coxæ approximata; abdominis segmentum primum ventrale

sequente parum longius; tibiæ ecalcaratæ; tarsi articulis tribus basalibus minutis æqualibus, articulo ultimo crasso elongato.

Antennæ short, first joint thick, concealed from above, second joint globular, third small, much narrowed from apex to base; 4-9 each quite small, the first of them slightly, the last of them considerably, shorter than long; two terminal joints forming an abrupt club, the pubescent terminal joint being evidently narrower than the tenth. Head more than usually exerted, with prominent eyes. Thorax quite destitute of antennal grooves or impressions. Each pair of coxæ only slightly separated, extremity of prosternal process turned upwards. First ventral segment in the middle only slightly longer than the following. Tibiæ hispid externally, rather more slender at the apex, not spinose there. Femora thicker at the knees.

The genus is somewhat difficult of location in Erichson's system; if it be placed, as it would appear from the systematic characters that it should, among the genera at the commencement of the Sychitini, near *Diodesma*, then it is very different from any of its neighbours.

NEOTRICHUS HISPIDUS, n. sp. (Plate III. fig. 1.)

Fuscus, setulis erectis griseis hispidus, angustulus subparallelus; prothorace elongato, posterius inæquali, lateribus in medio subconstrictis; elytris profunde crenato-striatis, interstitiis angustis. Long. 4-5 millim.

Head narrower than the thorax; the latter longer than broad, with uneven surface, but without distinct depressions or elevations; the front angles rounded, not prominent; the sides irregular, presenting a shallow broad constriction at the middle; the surface hispid; the setæ most conspicuous at the sides, where they project outwards. Elytra elongate, narrow and parallel, with deep sculpture forming quite irregular series, with narrow, definite, but only slightly elevated interstices which bear erect setæ. Under surface quite dull, coarsely punctate; the setæ on the outer edges of the tibiæ very conspicuous.

Nagasaki, Oyayama, and Hitoyoshi, on Kiushiu; Kashiwagi and Nikko, on the main island.

ENDOPHLEÛS SERRATUS, n. sp.

Parum convexus, rufus, indumento obscuratus, suboblongus, superficie valde inæquali; prothoracis lateribus rotundatis, posterius fortiter angustatis, marginibus serratis; elytris tuberculatis, marginibus crebre denticulatis. Long. 4-5 millim.

This species is allied to *E. exsculptus*, but has abundant points of specific distinction. The thorax is lobed in the middle in front, deeply emarginate on either side above the eye, so that the front angles appear very prominent; its margins are very ragged, but the serrations do not extend to the base, the rough margin ceasing in front of the narrow basal portion, so as to give space for the movement of the front legs; the surface exhibits also two irregular, not much elevated, costæ. The elytra bear numerous coarse rough tubercles, each surmounted by a seta, and between the tubercles numerous smaller asperities, and there are a few oblong, depressed, smooth spaces; the side margins bear numerous elongate denticles, each terminated by a seta. The tibiæ are rather broad, compressed, their outer margin armed with scales that are scarcely prominent. The surface has always the sculpture more or less obscured by a coating of some exudation or incrustation, but the description is drawn from a specimen from which this has been removed.

Hitoyoshi, Yuyama, Idzu, Miyanoshita, and Kurigahara.

SYMPANOTUS, nov. gen.

Corpus oblongum; caput parum receptum; antennæ 11-articulatæ, articulo basali subcondito, clava parum abrupte biarticulata. Tibiæ lineares, ecalcaratæ, tarsi articulis tribus basalibus subæqualibus. Metasternum elongatum.

Although evidently near to *Endophlæus* in its characters, this will, I think, prove to be a quite distinct genus, the tibiæ being slender, not at all compressed, and the sculpture and clothing, as well as the form of the various parts, all different from what obtains in *Endophlæus*. The eyes are prominent, and the groove for the base of the antenna so short that it may be said to be absent; the apex of the mandible is divided; the prosternal process prolonged a little behind the coxæ; all the coxæ only slightly separated; the first ventral segment in the middle longer than the following one, but behind the coxæ rather shorter than it.

SYMPANOTUS PICTUS, n. sp. (Plate III. fig. 2.)

Oblongus, subparallelus, nigro-fuscus; prothorace transversim subquadrato, angulis anterioribus rectis, marginibus integris; superne breviter sparse flavo-setulosus, in elytris guttulis parvulis albidis ornatus. Long. $4\frac{1}{2}$ – $5\frac{1}{2}$ millim.

Antennæ pitchy black, first and second joints subequal, extremity of the first visible from above, third joint rather longer than

second, ninth broader than those preceding it, transverse, tenth and eleventh forming a quite loosely articulated club. Head rather elongate, without elevations over the insertion of the antennæ; eyes rather large. Thorax broader than long, nearly straight at the sides, a little narrowed behind, the front rather deeply sinuated on each side, so that the front angles are prominent; the sides only slightly explanate; the surface very slightly impressed, quite dull; sculpture covered by a depressed dark squamosity, while along the middle there are some rather inconspicuous pallid, small, depressed scales, bordering the obscure impressions. Scutellum transverse. Elytra without elevations, and with no distinct sculpture, but with a dark depressed squamosity like that of the thorax, and mixed with this some flavescent scales, and also with some white scales forming eight or ten spots on the disk. Legs black; tarsi piceous. Under surface very dull, without definite sculpture, but with distant very minute pallid setæ.

Oyayama in Higo and Oyama in Sagami; seven examples.

PSEUDOTARPHIUS.

This genus will be found described at length by Wollaston in the *Trans. Ent. Soc. Lond.* 1873, p. 1 *et seq.* It differs from *Glyphocryptus* by its convex form, more separated legs, shorter metasternum, and the obscurely margined, not explanate, sides of the thorax. The only species known is that described by Wollaston.

PSEUDOTARPHIUS LEWISII.

Pseudotarphius Lewisii, *Woll. op. cit.* p. 4.

Nagasaki, Yuyama, and Hagi (*Mr. Hiller*).

GLYPHOCRYPTUS, nov. gen.

Corpus latum, parum convexum, squamosum. Antennæ 10-articulatæ, clava uniarticulata, articulo basali condito. Prothorax fortiter transversus. Tibiæ simplices, tennes, margine externo squamoso; tarsi tennes, articulis tribus basalibus parvis, æqualibus.

This insect has more the appearance of a broad *Coxelus* than of any other genus; but it is at once distinguishable therefrom by the club of the antennæ, which shows only indistinct traces of a division into two joints, so that these organs may be called ten-jointed. There is no trace of antennal grooves on the thorax,

and those on the head are short and broad, the head being but little exerted and short; the eyes are quite visible on the under surface. All the coxæ are moderately separated, the metasternum rather short, though longer than in *Coxelus*.

GLYPHOCRYPTUS BREVICOLLIS, n. sp.

Breviter suboblongus, parum convexus, opacus, rufescens, superne squamulis griseis, brevissimis, subrectis vestitus; hic inde subguttatus. Long. 3 millim.

Antennæ rather slender, the ninth joint not at all broader than the preceding, as long as broad, tenth forming a rather small oval club. Head short and broad, densely squamose; eyes scarcely visible from above. Thorax about twice as broad as long, bisinuate in front, the anterior angles acute and prominent, the medial lobe projecting nearly as far forwards as they, the sides rounded in front, abruptly constricted to form a very short space for the play of the front femora, the sculpture quite obscured by very short coarse erect scales; these extend to and project over the lateral margin, where they form a solid border. Elytra with their sculpture obscure, bearing rows of fuscous scales, and here and there with more pallid scales, giving a very obscurely spotted appearance; the outline not at all sinuate behind.

Yuyama in Kiushiu; two examples.

LABROMIMUS, nov. gen.

Corpus suboblongum, parum convexus, dense squamosum, variegatum. Antennæ squamosæ, 11-articulatæ, clava minus abrupta, biarticulata. Prothorax fortiter transversus, parum emarginatus, marginibus explanato-elevatis. Tibiæ graciles, lineares, tarsi articulo basali quam sequens duplo longiore.

This genus may be placed near *Colobicus*, though not apparently very closely allied to any other yet characterized. The fact that the antennæ are clothed with variegated scales or setæ will greatly facilitate its recognition; their basal joint has only its extremity visible, the second short, conical, almost in fact triangular, the ninth slightly transverse, the tenth and eleventh forming a rather laxly articulated club, and not clothed with scales like the others; the eyes are large, and set with closely-placed short scales. The terminal joint of the maxillary palpus is thick, and is truncate at the apex; the antennal grooves are deep

and extend back nearly to the front margin of the thorax. All the coxæ moderately separated, the hinder pair are not very much more so than the others; the tibiæ slender, without spurs, and the basal joint of the hind tarsus as long as the two following together.

LABROMIMUS VARIEGATUS, n. sp. (Plate III. fig. 3.)

Niger, densius squamosus, elytris variegatis, ad basin grisescentibus, pone medium fascia transversa macularum albidarum parvularum, et prope suturam maculis oblongis tomenti nigri; antennis pedibusque squamosis. Long. 4-5 millim.

Antennæ rather stout, clothed with fuscous and a few white scales, the tenth joint very strongly transverse. Head short and broad, densely clothed with grisescent scales, over the antennal insertion with broad, very low elevations. Thorax quite twice as broad as long, the sides rounded, the front angles not greatly prominent, the broad median lobe extending quite as far forwards as the angles; the surface rather uneven, being elevated along the middle, and bearing there four patches of intense black squamæ, two quite on the front margin, two, larger, on the disk; the surface rough and squamose, the lateral margin covered with projecting scales very closely set. Elytra at the base with some grisescent scales, which on the shoulder extend backwards so as to be there conspicuous, and with four patches of black tomentum; behind the middle with a row of small raised pallid spots, and just in front of these, touching the suture, two small patches of black raised scales; the surface appears to be crenate-striate, but the sculpture is obscured by the squamosity.

A good series of this species was procured at Oyama; and it was also met with at Kashiwagi, and in Yezo at Junsai.

COLOBICUS GRANULOSUS.

Oblongus, parum convexus, rufescens, prothorace elytrisque piceis, marginibus rufis; thorace elytrisque crebrius granulosus, tenuissime subtiliter pubescentibus; oculis longius setulosis. Long. $5\frac{1}{2}$ millim.

Thorax strongly transverse, anterior angles prominent, sides explanate, lateral margin closely and distinctly serrate; surface not punctate, but covered with rather coarse granules. Elytra covered with numerous granules like those of the thorax, but arranged in irregular longitudinal series; each granule bears a fine, short, upright hair; the lateral margins are also granulose,

giving a minutely denticulate appearance; each granule bears a hair projecting outwards. Under surface covered with obsolete granules.

This species differs from the following not only in sculpture, but in some of the more detailed structural characters. The clypeus is somewhat differently formed; it exhibits a slight incassation on each side; the third joint of the antenna is not twice as long as the fourth; the eyes have fine, rather long hairs in place of minute scanty scales; and the antennal furrows are deeper and rather shorter. It is allied to *C. limbatus* and to *C. rugulosus*, Pasc.

Two examples were found at Nikko.

COLOBICUS EMARGINATUS, var.

Colobicus emarginatus, *Latr. Gen. Crust. et Ins.* ii. p. 10.

The Japanese specimens are broader and larger than the European, attaining 5 millim. in length; the sides of the thorax are more rounded, and less turned upwards, and the interstices between the series of punctures on the wing-cases are broader.

Five examples were found at Kashiwagi, in June.

ACOLOPHUS, nov. gen.

Corpus ovale, parvum, depressum. Tarsi antennæque debiles, hæc 11-articulatæ, clava biarticulata; oculi superne et inferne conspicui, capitis sulci antennarii elongati, arguti.

This genus need not be described at length, owing to its close relationship with *Colobicus*, from which it differs by the elongate antennary grooves which extend backwards beyond the eyes, while at the front angles of the thorax there is an extremely slight impression for the reception of the antennal club; this impression is merely a large indefinite hollow, but does not exist in *Colobicus*. The parts of the mouth, the tarsi, and antennæ are much more feeble than they are in *Colobicus*, the trophi being placed quite on the front part of the under surface of the head. The metasternum is elongate, the first ventral ring quite short, only about half as long as the metasternum. Under a high power the eyes are seen to be studded with excessively short minute asperities, which can scarcely be entitled to be called setæ.

ACOLOPHUS DEBILIS, n. sp.

Rufo-fuscus, opacus, parum sculpturatus, æqualis; corpore superne squamulis sparsis albidis vestito, margine laterali omnium subtilissime crenulato, densissime brevissimeque albido squamoso. Long. $2\frac{1}{2}$ millim.

Antennæ small and slender, the basal joint quite concealed, the second slender though broader than those following, these minute and similar to one another; club rather long, very distinctly biarticulate. Head flat, broad; rather short; eyes quite conspicuous, not globular. Thorax strongly transverse, the sides evenly rounded in front and behind, the front angles prominent but only short, the front margin in the middle truncate, not lobed, the sides explanate; colours fuscous, reddish at sides; surface dull, without distinct sculpture, with a few fine pale depressed scales. Elytra dull, with very fine lines of sculpture, and with a few very small pale setæ; the lateral margins, as well as those of the thorax, extremely densely and finely crenulate, and fringed with excessively short, minute, contiguous white setæ.

Nikko, and on the Wada-toge in the month of August; three examples.

CICONES.

Cicones, *Curt. Brit. Ent.* iv. pl. 149; *Er. Ins. Deutsch.* iii. p. 272.

The characters by which this genus can be distinguished from *Synchita* will require reconsideration, as I am unable to find in the type of *Cicones*, viz. *Synchita variegata*, Hellw., the structure of the antennary grooves described by Erichson, and which is the only character of importance yet pointed out to distinguish the two. In *Cicones*, as represented by *C. variegata*, the antennary grooves are very short, and in *Synchita*, as represented by *S. juglandis*, they are still shorter, but of a similar character, and in other species they appear to be intermediate. Thus I only place the Japanese species in *Cicones* because of the close affinity of *C. ocellatus* with the European *C. variegatus*. *C. ditomoides* appears to be a very intermediate form; while the N.-American *S. parvula* is, so far as facies goes, quite a *Cicones*.

CICONES OCULATUS, n. sp.

Oblongo-ovalis, fuscus, annis pedibusque rufis, elytris testaceis, fusco-signatis; oculis convexis. Long. 3 millim.

Antennæ with joints 3-9 small, the tenth joint forming a very large circular club. Thorax transverse, a little narrowed behind, the sides slightly curved at the front angles, which are scarcely prominent; fuscous black, the surface rather uneven, not distinctly sculptured, but variegate with some patches of cinereous setæ. Elytra pale red, with some irregular transverse black

marks, the largest of which is a large mark surrounding the scutellum; the black colour descends backwards along the suture, and connects two waved transverse marks, which, in a more or less indistinct manner, tend to be connected with the side margin by more pallid prolongations; their sculpture is indistinct, but they bear series of short white setæ.

This is very similar in size and shape to *C. variegatus*; but the thorax is more truncate in front and at the sides, the eyes are more globular, and the club of the antenna is twice as large.

Three examples were found: Nikko, Oct. 1880, and Wadato-toge.

CICONES OBLONGUS, n. sp.

Oblongus, fuscus; antennis pedibusque rufis, his femoribus obscuris, elytris testaceis, fusco-signatis. Long. $3\frac{1}{2}$ millim.

This is closely allied to *C. oculatus*, but is of more elongate form, has the eyes a little less prominent, the front angles of the thorax more prominent, and the femora darker. It is equally close to the European *C. pictus*, Er.; but has the eyes a little more prominent, and on the underside of the head larger, the club of the antenna a little larger, and the surface of the thorax less uneven, with the sides less dilated.

Sapporo; two specimens.

CICONES NIVEUS, n. sp.

Breviter ovalis, antennis elytrisque testaceo-ferrugineis, his plus minusve nigro-guttatis, pedibus fusco-rufis, brevibus; corpore superne magis conspicue albido-setoso. Long. 2 millim.

The individuals are much smaller than those of *C. variegatus*, and have short antennæ and legs; the head is small, with the eyes only moderately large but prominent. The thorax is rather strongly transverse, with the sides but little rounded, and the front angles only slightly prominent; the surface is a little uneven and clothed with coarser and finer white setæ; these at the lateral margin are closely set, and so form a narrow continuous white border. Elytra with isolated black marks, placed as much at the sides as at the suture, the suture not black; the white setæ conspicuous, and with a few rather coarser ones placed in a serial manner amongst the rest.

Kashiwagi, 16th June; Chiuzenji, 22nd Aug. 1881; one example from each locality.

Although the two specimens differ considerably in the number and size of the black spots on the elytra, the species can be readily distinguished by the other characters, especially by the white margin of the sides of the thorax.

CICONES MINIMUS, n. sp.

Breviter ovalis, convexus, fuscus; pedibus fusco-rufis, elytris vage rufo-maculatis, setulis albidis erectis. Long. $1\frac{1}{2}$ millim.

Antennæ short, black. Thorax strongly transverse, but little rounded at the sides, the front angles not prominent, the surface quite dull, with a few griseous setæ, and a very short lateral fringe of densely-set white setæ. Elytra dull, dilute black, each with three rather vague red marks placed parallel with the suture; bearing numerous rather fine setæ of different colour, forming a rather scanty clothing, and also with a few short, coarse, erect, white setæ arranged serially. Legs feeble, sordid red, with the femora darker.

Although only a single example has been found, I think it represents a species distinct from *C. niveus*. It is probable that varieties of that species may be found with the elytra as extensively dark as in *C. minimus*; but the dark antennæ, and shorter, more convex form will probably prove sufficiently constant.

Yuyama, May 1881.

CICONES BITOMOIDES, n. sp.

Oblongus, parallelus, parum convexus, opacus, rufescens; thorace fusco; elytris nigro rufoque variegatis, seriebus regularibus squamarum erectarum pallidarum munitis. Long. $2\frac{1}{4}$ - $2\frac{1}{2}$ millim.

Antennæ short, red; eyes small. Thorax as broad as elytra, straight at the sides, front angles only slightly produced, transversely convex, not impressed, margins armed with very short thick pale setæ or scales. Elytra red, behind the base with a broad lateral patch extending inwards to the suture, with a similar subapical mark extending also towards the suture, and more or less distinctly connected with the anterior dark mark by some dark colour along the suture, and armed with remarkably regular series of equidistant erect pallid scales. Legs clear red, short.

This species differs from the typical *Cicones* in having the sides of the thorax beneath vaguely impressed, and the coxæ less widely separate.

Nara, end of June; Suwa temple, Nagasaki, 17th April. Three examples.

TRIONUS, nov. gen.

Corpus depressum, sculpturatum. Antennæ basi tecta, 11-articulatæ, clava biarticulata; sulci antennarii elongati. Coxæ valde approximatae, tibiæ lineares, ecalcaratæ; tarsi articulis tribus basalibus parvis. Abdominis segmento ventrali basali brevi. Ex affinitate generis *Bitomæ*, sed sulcis antennariis elongatis.

On the underside of the head the eye appears rather large, and along its inside margin there is a slender antennal furrow, which extends backwards beyond the eye, curving behind it, where a small fossa is found for the base of the club, the other side of the club reposing on the front margin of the prosternum. All the coxæ are more than usually approximate, and the first ventral plate is but little longer than that following it.

Although similar in appearance to *Bitoma*, this insect cannot be placed in it on account of the antennal grooves, as described above. I have a second species, closely allied to *Trionus opacus*, in my collection from East India.

TRIONUS OPACUS, n. sp.

Rufescens, elytris fuscis; opacus, depressus, rude sculpturatus; prothorace elytrisque costatis. Long. $2\frac{1}{4}$ –3 millim.

Antennæ short, the ninth joint quite small. Head with raised rough granules. Thorax transverse, straight at the sides, and with the front angles a little prominent; the surface rough, and with some fine raised irregular ribs; the middle pair possessing some abbreviated pieces at the base connected with it, and being near the front abruptly constricted; the outer pair more regular, but slightly sinuate, and towards the front curving inwards; the side of the thorax is directed outwards, and is indistinctly crenate, without raised margin. The elytra have each three very strongly elevated fine ribs, and between them are transversely reticulate, the reticulations being the fine interstices of large punctures. Underside of head granular; ventral plates transversely impressed.

Nagasaki, Ichiuchi, and Yumamoto; eight examples.

XUTHIA PARALLELA, n. sp.

Fusca, opaca, antennis pedibusque rufis; prothorace oblongo, argute quadricostato; elytris fortiter punctatis subtiliter costatis. Long. $3\frac{1}{2}$ millim.

Club of antenna very loosely articulated. Head densely and finely granulose, quite dull, sides a little raised. Thorax oblong quadrate, being slightly longer than broad, with straight sides, granulose, quite dull, on each side with two costæ, in addition to the side margin, extending the whole length, the two inner a little convergent behind, between them with two short longitudinal elevations on the front margin. Elytra rather more than twice as long as the thorax, quite dull, with regular series of closely-placed angular punctures, the alternate interstices a little raised, the inner one more than the others, and all of the costæ more distinct near the extremity. Underside dull, coarsely punctate; ventral plates granulose.

The specimens vary somewhat in size and colour; frequently there may be seen an obscure reddish humeral mark.

A fine series was obtained in May 1881 at Hitoyoshi and Yuyama from Fungi on logs.

XUTHIA NIPONICA.

Xuthia niponica, Lewis, *Ann. Nat. Hist.* 1879, p. 462.

Angustula, subcylindrica, cinnamomea, opaca; prothorace oblongo, inæquali tantum subcostato; elytris seriatim fortiter punctatis, interstitiis alternis tantum obsoletissime elevatis. Long. $2\frac{3}{4}$ millim.

Antennæ short, with broad loosely articulated club, the ninth joint broader than those preceding it, the basal joint in part visible from the front; sides of the head evidently incrassate. Thorax about as broad as the elytra, a little longer than broad, very convex transversely, straight at the sides, just perceptibly narrowed behind, with a broad indefinite impression along the middle not extending to the base, outside this an irregular shallow impression extending the whole length; sides finely margined. Elytra with a series of closely-packed punctures; the second interstice from the suture very obscurely costate, the other alternate interstices scarcely perceptibly elevated; they are very slightly declivous obliquely before the apex.

This is an anomalous species, which will probably have to form a separate genus between *Xuthia* and *Ithris*; the antennæ are less covered at the base than in *Xuthia*, the clypeus being smaller and the form of the mouth more approximating to the *Colydium*-type; the metasternum, too, is more elongate.

Nagasaki; a single example in Mr. Lewis' bungalow, August 1868.

ITHRIS SCULPTURATA, n. sp. (Plate III. fig. 4.)

Rufo-fusca, antennis pedibusque rufis, elytris fuscis; prothorace quadricostato; elytris haud elongatis, posterius oblique truncatis, argute costatis, interstitiis fortiter sculpturatis. Long. $2\frac{1}{2}$ –3 millim.

Antennæ short, clear red, with loosely articulated three-jointed club. Sides of head strongly elevated. Vertex granulose; clypeus subtuberculate, not granulose. Thorax nearly as broad as the elytra, about as long as broad, only very slightly curved at the sides; the surface coarsely granulose, and adorned with four longitudinal ribs; the ribs are connected in front by an elevation of the anterior margin, the inner pair are flexuous, the outer straight; the sides are also strongly margined, the margin not being crenate. The elytra have each four costæ, and besides these the suture and outer margin are somewhat costate; the second costa from the suture is the most elevated, and diverges behind somewhat towards the side, joining the lateral margin before the apex, and defining externally the declivous apex; the grooves between these ribs bear two rows of deep punctures giving rise to a beautifully sculptured appearance. Ventral plates crenate; epipleuræ near extremity deeply crenate.

Yuyama, June 1st, 1881; three examples.

GEMPYLODES LEWISII, n. sp. (Plate III. fig. 5.)

Angustus, perelongatus, cylindricus, niger, opacus, antennis pedibusque rufis; prothorace canaliculato, basi tri-impresso; elytris subcostatis. Long. 7–8, lat. $\frac{3}{4}$ millim.

Antennæ broad, broader from the third to the tenth joint, so that the first of these being as long as broad, the latter is strongly transverse. Thorax very elongate, narrowed from behind the middle to near the base, at which it is again a little broader; it is only sparingly and finely punctate, but is quite dull, and has on the middle a conspicuous channel occupying the greater part of its length, and at the base three large impressions. Elytra almost without sculpture, except that the alternate interstices are a little elevated; these elevations become well marked at the extremity, which is obliquely declivous; the actual apex is emarginate in the middle, and on the middle of each side of the emargination there is a small tooth.

Yuyama, in Higo; forty examples.

CYLINDROMICRUS, nov. gen.

Corpus angustum, cylindricum. Antennæ breves 11-articulatæ, articulo basali haud condito, clava brevi, lata, biarticulata. Tibiæ calcaratæ; tarsi articulo basali elongato.

The head is short and broad, deflexed, provided beneath with elongate antennal grooves, which, owing to a considerable extension inwards of the eye, are convergent behind. The front coxæ are contiguous, subexserted, a small raised process of the prosternum existing behind them; middle coxæ separated by a far from narrow process of the mesosternum. Metasternum very elongate; posterior coxæ not widely distant; first ventral plate much longer than the following. Tibiæ but little angulate at the apex, each with a rather long slender spur; tarsi filiform, basal joint of the posterior nearly as long as the other three together.

This is allied to the genus *Metopiestes*, Pascoe, about whose position its describer was probably mistaken. The present genus at any rate must be assigned to the vicinity of *Colydium*, not to the Bothriderini, where *Metopiestes* was located, but which in the Munich Catalogue stands near *Colydium*. It differs from *Metopiestes* by the slender form, and undilated femora; by its tibiæ, of which even the front pair are but little angulate externally, with a comparatively feeble spur; and by the less separated hind legs. In Horn's arrangement of the family both *Metopiestes* and *Cylindromicrus* would be placed in the group Deretaphrini, on account of the contiguity of the front coxæ.

CYLINDROMICRUS GRACILIS, n. sp. (Plate III. fig. 6.)

Elongatus, angustulus, cylindricus, castaneus, parum nitidus, fronte dense tomentosa; elytris costis tenuibus elevatis. Long. $3\frac{1}{2}$ millim.

Head furnished on the anterior part with a dense erect pile, such as is seen in some species of Tomicidæ in a similar position. Thorax elongate, a little narrowed behind; lateral margin extremely fine; surface dull, bearing a peculiar moderately close sculpture of elongate punctures or scratches; in front the scutellum with two obscure longitudinal elevations connected in a curve behind. Elytra elongate, somewhat obliquely declivous before the somewhat prolonged apex, each with five parallel fine sharply elevated costæ, but without other sculpture; the third of these costæ is strongly elevated at the apex, and curves round

and connects with the suture, the intermediate costa ceasing abruptly a little behind the commencement of the declivity.

Oyayama, near Kumamoto; two examples.

TEREDOLEMUS, nov. gen.

Corpus subcylindricum. Antennæ 10-articulatæ, articulo basali libero, clava magna rotundata uniarticulata. Tibiæ extus ad apicem vix angulatæ, calcaribus minutis; tarsi parum elongati, articulo basali tibiæ apicem haud superante. Coxæ anteriores contiguæ, intermedia et posteriores acuminatæ; abdomen segmento primo ventrali sequente conspicue longiore.

This genus is allied to *Teredus* and to *Oxylæmus*; from the former it differs by the structure of the antennæ, and the shorter form, the prosternum in front of the coxæ being but little elongate: in the structure of the antennæ it agrees tolerably with *Oxylæmus*, from which it differs in a number of characters, such as the simple tibiæ, the uncompressed prosternum, and the obsolete antennal furrows. One of the species has been already described by Mr. Lewis as a *Teredus*; but he remarked that the species would probably require generic separation on account of the antennal structure.

TEREDOLEMUS POLITUS. (Plate III. fig. 7.)

Teredus politus, Lewis, *Ann. Nat. Hist.* 1879, p. 462.

Konose in Higo; seven specimens.

TEREDOLEMUS GUTTATUS, n. sp.

Cylindricus, parum elongatus, nitidus, niger; elytris ad apicem, antennis pedibusque rufis; subtiliter punctatus. Long. $2\frac{3}{4}$ -3 millim.

Thorax about as long as broad, sparingly and finely punctate. Elytra with rows of fine punctures, becoming obsolete at the extremity; interstices impunctate, each impressed near the suture just before the apex, and the apical portion furnished with a very few elongate extremely fine setæ.

The individuals of this species are smaller than those of *T. politus*; and are readily distinguished by the large red mark and the finer punctuation. The species probably preys on some member of the Tomicidæ, to some of which it is similar in form; and it is curious that the apex of the body is also like many *Xylebori* in form.

A good series of this species was secured at Kashiwagi in the month of June, and it was also met with during the previous month at Yuyama.

LEPTOGLYPHUS, nov. gen.

Antennæ 9-articulatæ, clava maxima, inarticulata; tibiæ extus angulatæ; coxæ posteriores valde distantes.

This genus, allied to *Bothrideres*, is distinguished by the peculiar structure of its antennæ; their basal joint is short and very thick, but quite exposed, the second joint very short, transverse, angulated above, third joint slender, 4-8 small; terminal joint very large, subtriangular, with the apex of the triangle articulated to the eighth joint, and the free base of the triangle together with the angles somewhat curved, quite as broad as the length of the joint. The eyes are large, convex, finely granulate; the palpi small and slender; the front. coxæ moderately distant, the prosternum between them very distinctly divided. The metasternum is very elongate, the first ventral segment three times as long as the second; the front tibiæ are very strongly angulate at the apex externally, the middle more slightly so, the hinder almost simple.

LEPTOGLYPHUS VITTATUS, n. sp.

Parum elongatus, haud depressus, niger, opacus; antennis pedibusque rufis, elytris late longitudinaliter rufo-bivittatis, argute costatis. Long. $3\frac{1}{2}$ millim.

Head small, only about half as broad as the thorax, densely punctate. Eyes convex. Thorax much narrower than the elytra, about as long as broad, the sides rather finely margined, and forming an obtuse angle a little in front of the middle, the surface coarsely and closely punctate, obscurely depressed along the middle, the depression broadest and most distinct at the base. Elytra with the upper part chiefly red, but the deflexed sides black, and the suture also of this colour, each with three acutely elevated costæ, and on each side of each costa a series of very fine punctures.

Hitoyoshi, 17th May, 1881; a single example.

EROTYLATHRIS COSTATUS, n. sp. (Plate III. fig. 8.)

Piceus, opacus, prothorace quadricostato, costis posterius a fissura transversa profunde divisus; elytris sulcatis, interstitiis argute elevatis et subtilissime crenatis. Long. 4-5 millim.

Thorax a good deal narrowed behind, much longer than broad, traversed by two coarse, much elevated, longitudinal ribs on each side of the middle; and the side has a fine raised margin, parallel

to which is another fine elevation that joins the outer of the two coarse ribs some distance in front of the base, and just in front of this junction is connected with the fine lateral margin by a small elevation that causes the side of the thorax to appear slightly denticulate; in front of the base there is a very deep transverse cavity that divides the two middle costæ, but the interruption is only brief, as the extremities of the divided costæ project somewhat over the cavity. The elytra bear very broad deep grooves separated by very regular narrow interstices, the summits of which are minutely crenate and furnished with excessively minute setæ; the grooves bear two series of punctures which are so nearly joined that, viewed in a particular direction, they appear as a single series of large punctures or impressions. Body beneath closely and coarsely punctate, quite dull.

This is no doubt rather closely allied to *Machlotes porcatus*, Pasc.; but it differs from the excellent description given of that species in the sculpture of the under surface, and in some of the details of the peculiar thoracic sculpture.

Rare. Nara and Nishimura on the main island, and Sapporo in Yezo. In all four examples.

DASTARCUS LONGULUS, n. sp. (Plate III. fig. 9.)

Oblongo-ovalis, elongatus; prothorace vix transverso, elytris angustiore, plagiatis fusco-squamoso; elytris costatis, nigro-griseoque densius squamosis. Long. 6-11 millim.

Although very similar to *D. porosus*, this is readily distinguished by its more elongate form, and particularly by the less transverse thorax, this being just about as long as it is broad at the base. The individuals vary much in size and a good deal in the coloration of the scales; the thorax is a little narrowed behind, and has the sides very densely squamose; there are also two lines of scales along the middle, a more indistinct line near the lateral margin, and a tubercular patch between the latter and the middle. On each elytron there are four series of squamigerous costæ, the scales of each being very dense, and variegated in a somewhat irregular manner, the paler scales being most conspicuous at the base and apex, and forming an irregular fascia behind the middle.

Nine examples were met with at Konose in Higo, May 17th, 1881. Probably the species may not extend northward out of Kiushiu

PYCNOMERUS VILIS, n. sp.

Oblongus, angustulus, nitidus, piceus; prothorace crebre fortiter punctato; elytris fortiter crenato-punctatis, interstitiis angustis impunctatis. Long. $3\frac{1}{2}$ millim.

Thorax longer than broad, a little narrowed behind, shining black or piceous, moderately closely punctured with rather coarse punctures that are not evenly distributed, so that the interstices in some places are broader, and there is an irregular smooth space along the middle. Elytra with very regular series of coarse elongate punctures, the interval between each two punctures being indistinct, while the interstices between the series are distinct and regular, and are nearly as broad as the series; at the extremity there is a small plica preceded by a depression. Under surface shining, coarsely but sparingly punctate; last ventral deeply impressed.

Both this species and *P. sculpturatus* belong to *Penthelispa*, Pascoe, which I cannot at present regard as more than a subgenus, it being distinguished from *Pycnomerus* only by the club of the antennæ being distinctly divided into two joints.

This species was found in several localities on the main island and Kiushiu, and a single example was met with at Junsai in Yezo.

PYCNOMERUS SCULPTURATUS, n. sp.

Oblongus, angustulus, opacus, piceus; prothorace dense fortiter punctato, disco minus extense bi-impresso; elytris fortiter crenato-punctatis, interstitiis angustissimis, punctatis. Long. $3\frac{1}{2}$ millim.

Similar in size and form to the preceding species, this is very distinct by its sculpture; it has, too, shorter and thicker antennæ. The head is deeply bifoveate; the thorax strongly margined at the sides, much narrowed behind, coarsely and very densely punctured, with two indistinct small impressions on the middle, and just behind them a minute shining space. Elytra with very regular series of coarse deep punctures, the intervals between the series very narrow, not more than half as broad as the series, but distinctly punctured. Under surface rather closely, coarsely punctured, but slightly shining; last ventral deeply depressed.

Tonosawa, near Miyanoshita. Three examples were found under bark of fir.

PHILOTHERMUS DEPRESSUS, n. sp.

Depressus, rufo-castaneus, nitidus; prothorace transverso, parce punctato, margine laterali subtilissime setoso; elytris seriatim punctatis, ad apicem lævigatis. Long. 2 millim.

Antennæ with the first joint broad, the intermediate joints slender, the ninth larger than those preceding and evidently transverse, the tenth and eleventh forming an elongate club. Head small, deeply immersed in the thorax. Eyes very small and prominent. Thorax a good deal broader than long, the sides straight, except in front, where they are greatly curved inwards to the front angles, which are greatly depressed; the lateral margin strongly raised behind, and furnished with some excessively fine outstanding setæ, which, however, are wanting on the anterior part; the surface quite shining, and sparingly but distinctly punctate. Scutellum transverse. Elytra with regular series of punctures which are quite distinct at the base, but disappear before the apex; the suture depressed behind, and furnished with an impressed stria, which gradually disappears as it extends forwards.

Found on the main island and Yezo, in eight examples; Miy-noshita, Hakone, Junsai, and Sapporo.

ECTOMICRUS, nov. gen.

Corpus breve, superne plus minusve setosum. Antennæ 10-articulatæ, clava elongata, apicem versus annulata. Pedes anteriores et intermediarum, posteriores medioeriter, distantes.

Although the insects for which I make this genus are very different in facies from *Cerylon*, they are nevertheless closely allied thereto, but are well distinguished by the less widely distant coxæ. The characters of the genus are taken from *Ectomicrus rugicollis*; *E. pubens* will, I think, have to form a distinct genus between *Ectomicrus* and *Cerylon*, as it differs in certain characters, as I shall mention below. In *Ectomicrus rugicollis* the club of the antenna is elongate and acuminate, its outer half being pubescent, and the pubescence so arranged as to give rise to an obscure appearance of the club being three-jointed. The eyes are small but very prominent; the fine lateral margin of the thorax is crenate; the front coxæ are separated only by a small space, the prosternal process being reflexed immediately behind them; the metasternum is but little longer than the first

ventral segment, this latter as long as the two following together. The legs are rather slender, the tibiæ broader towards the extremity, but rounded off so as to become narrower at the apex. *E. pubens* is more of the form of *Cerylon*, but has a shorter first ventral segment and shorter legs, and its antennæ have a less elongate, only very obscurely annulate club. The genus is also represented in Ceylon; and the species found there confirm the importance I have attached to the greater approximation of the front coxæ as a differential character from *Cerylon**; and they have the prosternal process received into a more or less distinct cavity of the mesosternum.

ECTOMICRUS RUGICOLLIS, n. sp.

Rufo-piceus, antennis pedibusque rufis, superne setulis tenuissimis brevibus erectis parcius vestitis; prothorace densissime grosse punctato, interstitiis angustis; elytris fortiter seriatim punctatis. Long. $2\frac{1}{2}$ millim.

Antennæ as long as head and thorax; second joint rather slender, longer than broad, a little longer than the third joint; joints 4-10 differing little from one another. Thorax transverse, a little

* The following description of another genus of *Cerylonini* from the Andaman Islands adds an insect of peculiar facies to the little group of genera constituting this division.

PACHYLON, nov. gen.

Corpus oblongum, subdepressum, nitidum. Antennæ 10-articulatæ, parum elongatæ, crassæ, articulo basali crassissimo, clava parum abrupta, elongata, acuminata. Palpi maxillares articulo ultimo minuto, acuminato, labiales perapproximati, articulo penultimo valde incrassato. Coxæ anteriores parum distantes, prosterni processus apice reflexo. Coxæ intermediæ sat, posteriores valde, distantes. Abdomen segmento primo basali magno, sequentibus tribus fere majore. Tibiæ ad apicem paullo latiores, sed vix angulatæ; tarsi articulis basalibus brevibus subtus setosis.

Although very dissimilar in appearance to *Cerylon*, this genus is closely allied thereto, but can be distinguished by the different shape of the tibiæ, and by the more approximate front coxæ, the prosternal process also being bent upwards immediately behind the coxæ, instead of becoming broader and flat.

PACHYLON GORHAMI, n. sp.

Oblongus, nitidus, niger, antennis pedibusque piceis; prothorace amplo, transverso, lateribus valde rotundatis, versus latera fortiter punctato, sed ad marginem ipsum impunctato; scutello lato; elytris regulariter seriatim punctatis, interstitiis latis, impunctatis. Long. 5-6 millim.

I have named this remarkable *Colydiid* in honour of the distinguished naturalist, the Rev. H. S. Gorham, to whose kindness I am indebted for my specimens. Andaman Islands.

curved at the sides, the front angles scarcely produced, but the sides distinctly narrowed towards them; the lateral margin very fine, irregular, its outline being apparently broken by the coarse punctures; the whole surface covered with very large, moderately deep punctures, placed so close together that the interstices are narrow and thread-like. Elytra closely covered with series of coarse punctures, the punctures occupying a larger space than do the interstices.

Subashiri, 4th May, 1880, and Oyayama. One example from each locality.

ECTOMICRUS PUBENS, n. sp.

Rufo-castaneus, nitidus, pube laxa parce vestitus; prothorace transversim quadrato, sat crebre subtiliter punctato; elytris seriatim punctatis, punctis apicem versus obsoletescentibus. Long. $2\frac{1}{2}$ millim.

First joint of antenna very broad, behind flattened so as to have a quadrate appearance; second joint slender, third short but distinctly longer than the minute joints following it. Head rather broad, though much narrower than the thorax, only very sparingly punctured. Thorax quite as broad as the elytra, very slightly curved at the sides, except at the front angles, where the curvature is more distinct; the lateral margin very distinct, obsoletely crenate; the surface somewhat sparingly punctate. Scutellum broad. Elytra short, with series of punctures that are rather coarse at the base, but become obsolete at the apex; the suture depressed behind, and furnished with a fine stria which disappears by passing gradually into the first series of punctures.

This species has been met with in a few examples only both on Kiushiu and the main island: Hitoyoshi, Oyayama, Yuyama, and Miyanoshta.

CERYLON CRASSIPES, n. sp.

Oblongum, ferrugineum, nitidum; prothorace subquadrato, basin versus angustato, fortiter punctato; elytris striatis, striis apicem versus obsoletis. Long. 2 millim.

Antennæ stout. Thorax about as long as broad, the sides straight but distinctly narrowed behind, the hind angles rectangular; the surface rather coarsely and closely punctate, the base a little elevated in the middle. Elytra with rather deep striæ, which become obsolete at the extremity; the interstices almost impunctate. Tibiæ very stout.

Although similar to *C. angustatum* and to *C. deplanatum*, this is

readily distinguished by the thorax being a little narrowed behind and by the very thick legs. Although in the small series before me these characters show considerable variation, yet I have not been able to satisfy myself that there is more than one species; though when more examples have been accumulated, such may prove to be the case.

This is apparently rare, only one or two examples having been procured at each of the localities where it was met with. Typical examples were obtained at Oyayama in Kiusiu, and at Miyano-shita and Nikko on the main island; a variety at Yuyama and Kashiwagi, and a very aberrant form with slender legs at Nikko and Oyayama.

CERYLON MINIMUM, n. sp.

Oblongum, testaceo-ferrugineum, depressum, nitidulum; prothorace oblongo basin versus vix angustato, sat fortiter punctato, elytris subtiliter striatis. Long. $1\frac{1}{3}$ millim.

Antennæ, except the club, rather slender. Thorax slightly longer than broad, only very slightly narrowed behind, not impressed at the base. Elytra finely striate, interstices impunctate. Legs rather stout; tibiæ short.

Although very closely allied to *C. crassipes*, I think, so far as I can judge from inspection of one example, that this is really distinct, and can be distinguished by the smaller size and much more slender antennæ.

Sapporo, Yezo; one example.

CERYLON CURTICOLLE, n. sp.

Oblongum, ferrugineum, nitidum; prothorace transverso, fortiter punctato, elytris fortius striatis. Long. $1\frac{1}{2}$ millim.

Antennæ rather slender, but with large club. Thorax strongly transverse, coarsely punctate, at the base a very small but distinct impression on each side. Elytra more deeply striate than usual, the striæ obsolete at the extremity. Legs slender. Prosternal process broad.

Although only one example has been procured of this species, I have no doubt it will be readily identified by the transverse thorax.

Ichiuchi, 1st May, 1881.

CAUTOMUS, nov. gen.

Caput minutum, palpis exsertis. Antennæ 10-articulatæ, clava elongata, quasi divisa. Prosternum longitudinaliter compresso-carinatum. Pedes posteriores sat distantes.

This genus is well distinguished by the minute head, in strong contrast with the ample thorax, and the palpi placed at the front of the mouth and more than usually exerted, as well as by the peculiar carination of the prosternum along the middle; this carina extends the whole length of the prosternum, and projects scarcely at all behind the coxæ, its extremity replacing the prosternal process. All the femora are rather large, the anterior pair being decidedly larger than the others. The middle coxæ are nearly contiguous, the metasternum rather short; the first ventral plate in the middle nearly as long as the two following together. The tibiæ are somewhat dilated externally, so as to be slightly angulate some distance above the apex.

CAUTOMUS HYSTRICULUS, n. sp. (Plate III. fig. 10.)

Fusco-rufus, opacus, setulis truncatis, erectis, pallidis conspicue vestitus; prothorace densissime rugoso-punctato; elytris dense obsolete sculpturatis. Long. 2 millim.

Antennæ with elongate acuminate club, which, owing to the apical half being pubescent, appears to be divided across the middle. Thorax strongly transverse, the sides greatly narrowed towards the deflexed front angles; the surface very dull, owing to extremely dense punctuations, the interstices of which can scarcely be detected; the lateral margin undulate behind, the base with a short indistinct excision at the angle. Elytra with a dense but very indefinite sculpture, the interstices of which are to be distinguished as a series of very minute, irregular, shining spaces, and provided with perfectly regular series of short, stiff, upright setæ. The thorax also bears similar setæ, but they are less distinct on it except at the margins.

This was met with in fifteen examples at Tagami, near Nagasaki, in the spring of the year 1881. This and the next species were taken in the centre of a large rotten fir, which measured many feet in circumference, and was probably more than 300 years old.

THYRODERUS, nov. gen.

Corpus minutum, convexum, fortiter sculpturatum. Antennæ 8-articulatæ, clava rotundata, uniarticulata. Prosternum utrinque maxime excavatum.

Head retractile, palpi small, slender, terminal joint extremely slender, acuminate; eyes minute, but very prominent. Prosternum with a chin-piece in the middle, to which the retracted head is quite closely applied, so that the mouth is entirely covered; the whole of the side of the thorax beneath, from near the front to the hind angle, is excavated, forming a very large cavity in which the retracted antenna can move freely; this excavation extends to the upper surface of the thorax, which bears two quite transparent spaces, admitting light to the interior of the antennal cave. The minute front coxæ are a little separated by a small process little dissimilar from that of *Cerylon*. Middle coxæ more widely separated than the anterior; posterior widely distant as in *Cerylon*; first ventral segment large, as long in the middle as the three following together, division between the fourth and fifth segments rather obscure. Tibiæ simple; tarsi with the three basal joints minute.

The extraordinary structure of the thorax is sufficient to distinguish this insect from all others we yet know, the whole of each side of the thorax forming a cave, lighted by two windows above, in which the antennæ can move about. Except for this peculiarity, I do not see anything which should militate against the placing of the genus in the *Cerylonini*, for although the antennæ are apparently only eight-jointed, yet their structure is similar to that of *Cerylon*, except for the disappearance of two of the small intermediate joints, a character which is perhaps not of very great importance.

THYRODERUS PORCATUS, n. sp. (Plate III. fig. 11.)

Anguste oblongus, convexus, fusco-rufus, opacus, dense punctatus, setulis brevissimis parce adpersus; prothorace utrinque prope marginem lateralem oblique bi-impresso; antennis pedibusque rufo-testaceis. Long. $1\frac{1}{3}$ millim.

Antennæ short, basal joint large, second smaller, almost spherical, the following five all minute, the eighth forming a rather large, shortly oval club. Head deflexed; eyes minute. Thorax rather broader than long, a little rounded at the sides, and a good deal narrowed in front, very convex transversely; rough, being extremely densely punctured, and bearing very minute upright setæ, with a broad lateral margin, near which are two curvate impressions, the posterior being the longer, and extending nearly to the base of the thorax. Elytra coarsely

and very densely punctate, the punctures in series, and the alternate interstices elevated, so as to form very fine, rather in distinct costæ, and sparingly clothed with erect, rather coarse, very short, pale setæ.

A good series was secured, in the same tree as *Cautomus hystriculus*, near Nagasaki, 25th March, 1881.

DESCRIPTION OF PLATE III.

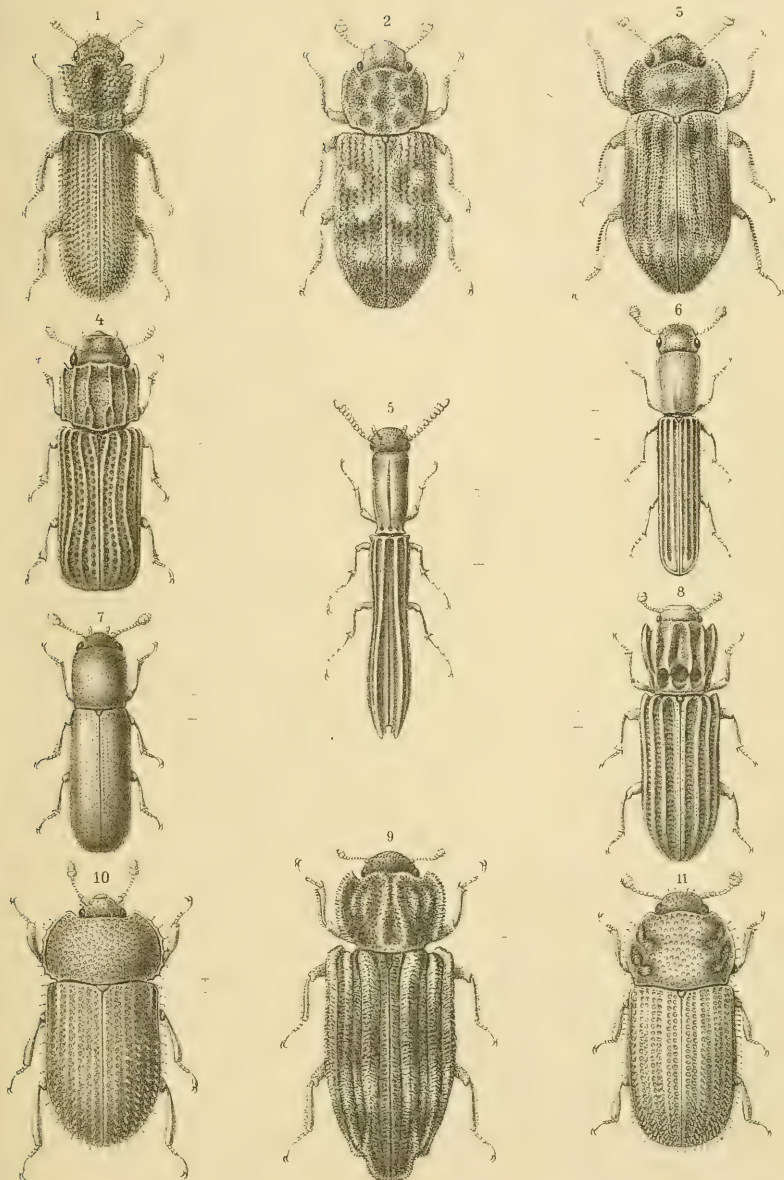
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| Fig. 1. <i>Neotrichus hispidus</i> , Sharp. | Fig. 7. <i>Teredolæmus politus</i> , Lewis. |
| 2. <i>Synpanotus pictus</i> , Sharp. | 8. <i>Erotylathris costatus</i> , Sharp. |
| 3. <i>Labromimus variegatus</i> , Sharp. | 9. <i>Dastarcus longulus</i> , Sharp. |
| 4. <i>Ithris sculpturata</i> , Sharp. | 10. <i>Cautomus hystriculus</i> , Sharp. |
| 5. <i>Gempylodes Lewisi</i> , Sharp. | 11. <i>Thyroderus porcatus</i> , Sharp. |
| 6. <i>Cylindromicrus gracilis</i> , Sharp. | |

Notes on the Antennæ of the Honey-Bee. By T. J. BRIANT.
(Communicated by B. DAYDON JACKSON, Sec. Lin. Soc.)

[Read 15th November, 1883.]

THE antennæ of the Honey-Bee (worker) are inserted quite close together, immediately above the upper margin of the clypeus (fig. 1). They consist of a pair of jointed cylindrical organs of two distinct parts, called respectively the scape and the flagellum. The scape is united to the cranium by a hemispherical cup, to which it is joined by a short constricted peduncle (fig. 2 *a*). At its anterior end it is united to the flagellum, and is normally at right angles to it.

The antenna moves as a whole upon a point or fulcrum formed by the interlocking of the peg or process (*a* in fig. 3) with the notch in the cup (*b* in fig. 2). This process arises on the inner or medial side of an arch which bridges over the antennary fossa to near its top on the outer edge, and the process is thus nearly in the centre of the fossa. The movements of the antenna are controlled by three muscles:—(1) a muscle inserted into the outer margin of the basal cup, which moves it outwards (figs. 3 & 4, *b*); (2) a muscle inserted into the upper and inner margin, which moves it upwards and inwards (*c*); and (3) a muscle inserted in the lower margin, which opposes the other muscles and lowers the antenna (*d*). These muscles arise from the internal skeletal parts of the cranium, which cannot conveniently be described without entering into details of the endocranium.



Freih. v. Schlereth del. F. Stricker lith.

Lith. Anst. v. Th. Barnewarth, Wien.

JAPANESE COLYDIIDAE.